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EXAMINER

MARCANTONI, PAUL D

ART UNIT	PAPER NUMBER
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1755

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/090,561

Applicant(s)

NAJI ET AL.

Examiner

Paul Marcantoni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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Objection to Specification-Non Enabling

The applicants' specification is objected to because it is non-enabling with respect to the various sizes of fly ash (smaller size fraction, larger size fraction, and coarse size fraction). There is overlap between all three size ranges and it is impossible to distinguish one size range (smaller, larger, or coarse) from another. The applicants do not define a clear upper and lower limit for what fly ash they consider smaller size, larger size, and coarse fraction but only provide the maximum particle size. This leads to not being able to distinguish between different categories of sizes. The same is true with respect to the coarse fraction. The applicants along the course of prosecution seem to have dropped the word "about" in greater than about 100 microns in order to distinguish between their larger fraction and the larger fraction portion. The problem is that by doing so they've created new matter not supported by their original disclosure. Greater than "about" 100 microns still reads upon 100 microns maximum because about permits some tolerance. About 100 microns can be 99 microns as about permits some tolerance and thus still fall under applicants' larger size particle size fraction of 100 microns maximum. "About" permits some tolerance. At least about 10% was held to be anticipated by a teaching of a content not to exceed about 8%. In re Ayers, 154 F 2d 182, 69 USPQ 109 (CCPA 1946). A pressure limitation of 2-15 PSI was held to be readable on a reference which taught a pressure "of the order of about 15 PSI." In re Erickson, 343 F 2d 778, 145 USPQ 207 (CCPA 1965).

The applicants' examples are also non-enabling. The applicants are referred to their own Examples 1, 2, 3, and 4. For each example in the provided table in applicants' specification, the applicants provide a listing of Fly ash (larger size fraction) and fly ash (smaller size fraction) yet nowhere do applicants define a specific particle size anywhere for any of these examples. It is *impossible* to examine or review these examples if it is unclear the specific particle size range for smaller size and larger size fly ash portions if they still overlap.

35 USC 112 First Paragraph-Enablement:

1) Claims 1-9 and 16-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The applicants' claims are non-enabling because there is no way to distinguish between the fly ash of the smaller size particle size range and the larger size particle size range (or the optional largest coarsest particle size fly ash). There is overlap between all three groups of fly ash and applicants *do not clearly define an specific upper and lower limit between each group to distinguish one group of fly ash from the other*. Again, as stated above, the larger particle size fly ash fraction of maximum particle size 100 microns still reads upon the optional additive of coarse fly ash fraction of greater than "about" 100 microns. Greater than "about" 100 microns still reads upon 100 microns maximum because about permits some tolerance. About 100 microns can

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be 99 microns as about permits some tolerance and thus still fall under applicants' larger size particle size fraction of 100 microns maximum. Again, the smaller size fraction only states that it must have a 10 micron maximum size but defines no range of upper and lower limit for particle size. Neither is there any upper or lower limit for the larger size fractions of fly ash particle size.

It is also noted that it is quite confusing that applicants define the first portion as the larger size portion fly ash in the specification yet provide the first portion in the claims as the "smaller" size portion. This is not consistent thus with the specification and it is unclear why applicants do not present consistency with first portion and second portion of fly ash in both their specification and claims (see claims and [0035-0037] in specification).

2) Claims 18 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 18 and 19 are not enabling because there is no limitation regarding the necessary "second" portion larger size fly ash. Applicants' original disclosure requires a smaller size fraction portion fly ash, a larger size fraction portion fly ash (See [0034] to [0037]), and optionally (see the language "may include" in [0038] regarding coarse fraction fly ash of greater than about 100 microns which is equivalent to optionally) a

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coarse fraction fly ash with particle size greater than *about* 100 microns. Claims 18 and 19 are missing the larger size fly ash fraction with about a 100 micron maximum particle size (See [0034]) and without this larger size fraction the applicants' claims are not enabling.

New Matter-Claims:

Claims 1-9 and 16-20 are rejected under 35 USC 112 first paragraph and 35 USC 132 as the specification as originally filed does not provide support for the invention as is now claimed.

Claims 1 and 20 contains new matter. The range of --the amount of 10 to 60 wt%-- is new matter in these claims and any other claims it occurs. Applicants are missing the word *about* of which without it the claim is new matter. The original disclosure (both specification and claims) only support about 10 to 60 wt% (See [0036] and original claim 11 which both use about 10 to 60 wt%

Also, in claims 1 and 20 or any other claim it is used, the newly added limitation -- of a different size range—is new matter that has no literal support in applicants' original disclosure (specification and/or claims).

Claims 12,18, and 19 contain new matter. The terms "greater than 100 microns" is new matter in these or any other claims it is used. There is only original support for greater than *about* 100 microns. Applicants are referred to their own specification (paragraph [0038]) and original claim 12 which requires the use of the term "about" in this particle size limitation for the coarse fraction fly ash.

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The terms “at least about 120 seconds or less” is new matter in claim 16 or any other claim it is utilized. Example 3 ([0068] of applicants’ specification is the only place that mentions 120 seconds. The specification only supports –The slurry is dewatered in 120 seconds--- and no more than that. There is no support for “at least about” or the terms “or less”. Thus, this is a new matter expression not supported by the original disclosure.

The terms “slurry cures in at least about 48 hours” is another new matter limitation not supported by the original disclosure. There is only support from Example 3, paragraph [0068] that states that the coated *sheet* (not slurry, its already been dewatered) is pre-cured for 48 hours. There is no support for slurry cures nor is there support for “at least about” 48 hours. Thus, this expression is new matter.

35 USC 112 Second Paragraph:

Claims 1-9 and 16-20 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

It is suggested that applicants remove the word based from the preamble terms “hydraulic binder based”. The terms hydraulic binder coating or hydraulic binder containing coating is advised as possible replacement terms in all claims this preamble is utilized.

The terms “around” can be construed as vague throughout the claims (e.g. claim 1-*around* 10 microns). It is not clear if around means exactly the same as about. If applicants hold these terms mean exactly the same thing, they should state so in their

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next response. If they do not respond, this term will be held to be indefinite. A better solution would be for the applicants to simplify issues by simply amending the claims removing all occurrences using "around" and replacing with the actual language they themselves use to describe their invention in the disclosure; That is, use of the word ---about--- instead of around regarding ranges of amounts. Consistency in the specification and claims simplifies matters and provides clarity.

The terms "different size range" in claims 1, 20, or wherever else it is used is indefinite as applicants do not particularly point out and distinctly claim the specific range in question for each grouping of fly ash (small, large, and the optional coarse fraction).

Obviousness Type Double Patenting:

Claims 1-9 and 16-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,749,897 (Naji et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because both teach the coating (whether actively or as an intended use) using the same components in overlapping amounts.

Note: Applicants submission of a proper terminal disclaimer over US Patent Numbers 6,572,697 B2 (Gleeson et al.), 6,676,745 B2 (Merkley et al.), 6,506,248, B1 (Duselis et al.), and 6,346,146 B1 (Duselis et al.) is acknowledged. However, the ODP rejection above is also necessary and teaches applicants' claimed invention.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated

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by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

35 USC 103:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9,12, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 60191074 A (Matsushita abstract), Liskowitz (WO 97/21640 which is PCT/US96/19936), Francis et al. '518, or Massey '944.

Note: Brothers et al. '921 has been withdrawn.

Explanation and analysis for JP '074 and Liskowitz can be found in preceding office actions. Applicants may refer back to them for further details.

Francis (US 5,439,518) teaches a composition comprising fly ash, gypsum (hydraulic binder), and water (see claims). Francis further teach that fly ash particle size ranges is conventional with particle sizes for it ranging from *about* 1 to 100 microns

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(col.3, lines 4-5). It is noted that the applicants three allegedly separate particle size ranges (small fly ash size, larger fly ash size, and optionally coarse fraction fly ash) all read upon simply the particle size range of fly ash obtained from a power plant because it contains particle sizes in applicants' claimed range. Further, there is no way to distinguish between applicants' named "small", "large" and "coarse" fly ash fractions and thus they can read upon simply fly ash.

Massey (US 4,441,944) teaches a building board composition comprising mixing Portland cement (hydraulic binder), fly ash, fibers, water, and other components in amounts overlapping applicants' claimed composition from mixing fly ash, hydraulic binder, and water (as well as fibers or other components). The applicants are referred to the claims for this teaching. It is further noted that, as was pointed out in Francis, Massey simply uses fly ash which typically and conventionally ranges from about 1 to 100 microns which is in the applicants' claimed ranges for small, large, and coarse (optional) fraction fly ash portions. Overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

It is also noted that the applicants are not claiming a *method of coating* but a *method of mixing* hydraulic binder (e.g. such as Portland cement or gypsum), fly ash, and water). Any prior art found that teaches mixing hydraulic binder, fly ash (in applicants particle sizes which is any fly ash from a power plant since it is about 1 to 100 microns), and water meets the limitations of applicants' claims. The applicants preamble is not a method of coating but a method of mixing (ie improving) for (not stated but "use") as a coating of a building board. Further, the last four lines of claim 1,

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for example, are also directed to the intended use of the known composition of fly ash, hydraulic binder, and water and the new use of a known composition is not a patentable distinction. Note that had applicants amended their claims to a method of coating, this could be held also as "non-elected by original presentation" because the original invention or method was only directed to a method of mixing fly ash, hydraulic binder, and water and it was not directed to a method of coating.

Response to Applicants' Arguments:

All arguments to Brothers are moot as it has been withdrawn.

The applicants argue regarding support for "at least about 120 seconds". The examiner disagrees and holds this is new matter as explained above. Applicants only have literal support for what is stated in their disclosure and no more than that.

The applicants also next seem to be holding the examiner to what was indicated initially as allowable over a year ago regarding this application. In rebuttal, interviews (personal or telephonic) are not binding and are also subject to the review of his supervisor who can overrule such a holding at *any* time. It is noted as stated above that the small size fly ash, large size fly ash, and coarse fly ash all still potentially overlap and applicants do not provide clear upper and lower limits to distinguish between any of these groups. It was already stated that even the examples provide no specific range of what was actually used (ie upper and lower limit particle sizes for what applicants used for small size fly ash and what actually was used for large size fly ash).

The applicants in the July 11th interview are again reminded that the examiner is not bound by any statements or assertions made in the interview. Interviews are held as

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courtesies to advance prosecution if possible though they do not always do so.

Nevertheless, the applicants arguments regarding the prior art not teaching a coating of a *building board* are not persuasive. The applicants process is a method of *mixing* and not a method of *coating* (See preamble to the independent claims) and it reads upon mixing fly ash, water, and hydraulic binder. The steps relating to coating a building board are relating to an intended use and thus are not a patentable distinction over the prior art. Massey has been presented as prior art in the rejection and does teach a building board. However, the prior art does not need to teach coating a building board because this again is an intended use limitation in the method claim of mixing hydraulic binder, fly ash, water, and other components. The applicants argue an *intended use* regarding the intended use of the mixture of fly ash, hydraulic binder, and water which can be used to coat a building board; not a patentable distinction.

Applicants argue that the prior art does not teach a dewatering agent added to their composition. The examiner disagrees. Fly ash is a dewatering agent and a component of all prior art references. Also, pulverized silica stone is a filler in JP '074 (Matsushita abstract) and it is equivalent to silica flour and also a dewatering agent. Liskowitz teaches adding silica fume which is equivalent to silica flour (see claim 21 on page 35).

The applicants argue limitations regarding cement coatings. Coatings using cements are conventional in the art. Further, the applicants argument regarding coating is not persuasive because their coating limitations are intended uses from the actual process they claim of mixing cement (hydraulic binder), fly ash, and water. The

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applicants are not claiming a method of coating and if they were to do so it would be held as an invention *non-elected by original presentation*. The applicants are respectfully referred to the very first claim (original claim 1) with the preamble "A method of making a hydraulic binder based coating". It is thus evident that the original invention is not a *method of coating* but a *method of making* a hydraulic binder coating by mixing hydraulic binder, fly ash (dewatering agent) and water. The fact that the slurry "can be dewatered through a building product" is also an intended use off the process with no patentable weight. Thus again, any arguments directed to coating a building product or coating a building board hold no patentable weight.

The applicants argue that the examiner's position that applicants independent claims read upon mixing fly ash and hydraulic cement (and water which makes cement hydraulic) is not a fair representation of their invention. Again, applicants are referred to original claim 1 (a method of making a hydraulic binder coating by *mixing* hydraulic binder, fly ash and water) The applicants are not claiming a method of coating but a method of *making* a coating. The applicants already hold a patent issued to a method of coating (See US Patent 6,749,897 (Naji et al.) using fly ash, hydraulic cement, and water. It is the examiner's position that the examiner's position is fair because applicants are claiming a method of making a coating and NOT a method of coating. The words method of making seem to have been removed along the course of prosecution but that does not mean that is what applicants are still doing for their process. Therefore, the examiner has provided prior art teaching a method of making a coating (not a method of coating) which reads upon mixing fly ash, cement, and water.

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Cement is conventionally applied as a coatings (stucco coatings are examples of hydraulic cement coating as it is plaster of paris).

The applicants argue they wish to hold the ODP rejection in abeyance until there is allowable subject matter. This is not proper procedure for traversal of an ODP rejection because applicants must either present reasons and traverse the ODP or else provide a terminal disclaimer. The form paragraph requires a *timely* terminal disclaimer and failure to provide a terminal disclaimer after final rejection can be held to be untimely. Failure to traverse the ODP rejection can also potentially be held as non-responsive as well.

It is the examiner's position that he has fully addressed applicants remarks in their response.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373.



Paul Marcantoni
Primary Examiner
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